

## STN Columbus

DE10227995

## ANSWER 1 OF 2 CAPLUS:

ACCESSION NUMBER: 2003:757652 CAPLUS  
 DOCUMENT NUMBER: 139:262474  
 TITLE: Method for the hydroformylation of olefins in the  
 manufacture of C7-17 aliphatic alcohols using phase  
 separation  
 INVENTOR(S): Toetsch, Walter; Arnoldi, Detlef; Kaizik, Alfred;  
 Trocha, Martin  
 PATENT ASSIGNEE(S): Oxeno Olefinchemie G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003078365	A2	20030925	WO 2003-EP2383	20030308
WO 2003078365	A3	20040205		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10227995	A1	20030925	DE 2002-10227995	20020622
AU 2003212316	A1	20030929	AU 2003-212316	20030308
EP 1485341	A2	20041215	EP 2003-708195	20030308
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1649815	A	20050803	CN 2003-809945	20030308
JP 2005529853	T2	20051006	JP 2003-576374	20030308
BR 2003008432	A	20060606	BR 2003-8432	20030308
US 2005171389	A1	20050804	US 2005-506603	20050308
US 6960699	B2	20051101		

PRIORITY APPLN. INFO.: DE 2002-10211652 A 20020315  
 DE 2002-10227995 A 20020622  
 WO 2003-EP2383 W 20030308

AB A method is described for producing C7-17 aliph. alcs. which comprises the  
 cobalt-catalyzed hydroformylation of C6-16 olefins or olefin mixts., using  
 an aq. catalyst system, sepn. of the catalyst, and subsequent  
 hydrogenation of the aldehydes to alcs. A liq.-liq. extn. is carried out  
 after the sepn. of the catalyst in the aq. system and prior to the  
 hydrogenation of the aldehydes in the org. system; process flow diagrams  
 are presented.

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## ANSWER 2 OF 2 WPIX:

ACCESSION NUMBER: 2003-731977 [69] WPIX  
 DOC. NO. CPI: C2003-201549  
 TITLE: Process for the production of 7-17 C aliphatic alcohols  
 comprises cobalt catalyzed hydroformylation of 3-16C  
 olefins whereby the organic phase is extracted with a  
 water containing liquid.  
 DERWENT CLASS: E17  
 INVENTOR(S): ARNOLDI, D; KAIZIK, A; TOTSCH, W; TROCHA, M; TOETSCH, W  
 PATENT ASSIGNEE(S): (OXEN-N) OXENO OELFINCHEMIE GMBH; (OXEN-N) OXENO  
 OLEFINCHEMIE GMBH  
 COUNTRY COUNT: 104  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003078365	A2	20030925	(200369)*	GE	28
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS					
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK					
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR					
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT					
RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA					
ZM ZW					
DE 10227995	A1	20030925	(200371)		
AU 2003212316	A1	20030929	(200432)		
EP 1485341	A2	20041215	(200482)	GE	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV					
MC MK NL PT RO SE SI SK TR					
US 2005171389	A1	20050804	(200552)		
TW 2003006293	A	20031116	(200557)		
JP 2005529853	W	20051006	(200566)		21
US 6960699	B2	20051101	(200571)		
CN 1649815	A	20050803	(200578)		
AU 2003212316	A8	20051027	(200624)		
BR 2003008432	A	20060606	(200640)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003078365	A2	WO 2003-EP2383	20030308
DE 10227995	A1	DE 2002-10227995	20020622
AU 2003212316	A1	AU 2003-212316	20030308
EP 1485341	A2	EP 2003-708195	20030308
		WO 2003-EP2383	20030308
US 2005171389	A1	WO 2003-EP2383	20030308
		US 2005-506603	20050308
TW 2003006293	A	TW 2003-105431	20030313
JP 2005529853	W	JP 2003-576374	20030308
		WO 2003-EP2383	20030308
US 6960699	B2	WO 2003-EP2383	20030308
		US 2005-506603	20050308
CN 1649815	A	CN 2003-809945	20030308
AU 2003212316	A8	AU 2003-212316	20030308
BR 2003008432	A	BR 2003-8432	20030308
		WO 2003-EP2383	20030308

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## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003212316	A1 Based on	WO 2003078365
EP 1485341	A2 Based on	WO 2003078365
JP 2005529853	W Based on	WO 2003078365
US 6960699	B2 Based on	WO 2003078365
AU 2003212316	A8 Based on	WO 2003078365
BR 2003008432	A Based on	WO 2003078365

PRIORITY APPLN. INFO: DE 2002-10227995 20020622; DE  
 2002-10211652 20020315

AN 2003-731977 [69] WPIX

AB WO2003078365 A UPAB: 20031027

NOVELTY - A process for the production of 7-17 C aliphatic alcohols comprises cobalt catalyzed hydroformylation of 3-16C olefins whereby the organic phase is extracted with a water containing liquid.

DETAILED DESCRIPTION - A process for the production of 7-17 C aliphatic alcohols comprises:

- (a) cobalt catalyzed hydroformylation of 3-16C olefins;
- (b) treatment of the hydroformylation mixture with oxygen containing gases in the presence of acid, aqueous cobalt (II) salt solutions;
- (c) separation of the mixture from (B) into a cobalt salt containing aqueous phase and an aliphatic aldehyde containing organic phase;
- (d) hydrogenation of the aldehyde containing organic phase whereby;
- (e) the organic phase from (C) is extracted with a water containing liquid.

USE - The process is useful for the production of 7-17C aliphatic alcohols by hydroformylation.

ADVANTAGE - The product from the process has a low residual cobalt catalyst content.

DESCRIPTION OF DRAWING(S) - The drawing is a schematic diagram of the process.

Hydroformylation reactor 1  
 Synthesis gas 2  
 Olefin mixture 3

Hydroformylation mixture 5  
 Catalyst separation 8

Dwg.1/3